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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,963	03/27/2001	Klaus Lowack	GR 00 P 1583	9891
24131	7590	11/28/2005	EXAMINER	
LERNER AND GREENBERG, PA P O BOX 2480 HOLLYWOOD, FL 33022-2480			TALBOT, BRIAN K	
			ART UNIT	PAPER NUMBER
			1762	
DATE MAILED: 11/28/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/817,963

Applicant(s)

LOWACK ET AL.

Examiner

Brian K. Talbot

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The Appeal Brief filed 9/15/05 has been considered and entered. Claims 4-7 remain in the application.

2. In light of the arguments filed 9/15/05, the Final Rejection, filed 1/13/05 has been withdrawn. The following rejection is applied.

Claim Rejections - 35 USC § 112

3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term “50 m” is unclear as to what the thickness “m” represents.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calabrese et al. (5,468,597) in combination with Greenwood et al. (5,679,498) or vice versa further in combination with Bickford et al. (5,800,858)

Calabrese et al. (5,468,597) teaches preparing a substrate, forming ligating groups over said substrate, forming a photoresist and imaging over the ligating layer, selectively applying a seeding layer to the ligating layer and plating (col. 3, lines 40-55). The photoresist may also be applied to the substrate prior to applying the ligating layer. The substrate is silicon.

It is noted that the claimed "activating step" is achieved by the prior art by "ligating layer".

Greenwood et al. (5,679,498) teaches a method for producing high density multi-layered integrated circuits carriers. Coating a base surface with a photosensitive dielectric material, curing and developing the photosensitive dielectric layer, depositing a catalyst to form a sensitized dielectric layer, applying a photoresist layer, developing and curing the photoresist layer, forming conductors on the exposed dielectric layer and repeating the steps (abstract and col. 8, lines 10-35)). The photosensitive layer having a thickness of 0.0007-0.0009 inches. The imaging and patterning is performed on both dielectric layers (photosensitive and photoresist).

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Calabrese et al. (5,468,597) fails to teach performing this process comprising two insulating layers overlying a substrate.

Greenwood et al. (5,679,498) fails to teach selective plating of the seeding layer after patterning the photosensitive layer.

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified Calabrese et al. (5,468,597) process by performing the process on an insulating layer atop a substrate as evidenced by Greenwood et al. (5,679,498) or to have modified Greenwood et al. (5,679,498) process by performing a “pretreatment” step comprising pretreating/patterning as evidenced by Calabrese et al. (5,468,597) with the expectation of achieving similar results, i.e. selective metallization.

Greenwood et al. (5,679,498) and Calabrese et al. (5,468,597) fail to teach the photosensitive thickness of 5 microns (2.1 mils).

Bickford et al. (5,800,858) teaches a similar process whereby the thickness of the polymer films are from 0.3 to 5 mils in thickness which are imaged, developed and seeded prior to metallization. More than one layer of the polymer can be utilized with the layers being of the same polymeric material.

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified Greenwood et al. (5,679,498) and Calabrese et al. (5,468,597) process by utilizing a photosensitive thickness of that claimed with the expectation of obtaining similar results.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 11/23/05

Brian K Talbot
Primary Examiner
Art Unit 1762

BKT